Columbus chamber of commerce Determining location of govt. armor plate plant

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Determining the Location of The Government Armor Plate Plant

Brief for Columbus, Ohio

The Columbus Chamber of Commerce
Columbus, Ohio

UF 533
U5 C7

185865

Hon. Josephus Daniels,
Secretary of The Navy,
Washington, D. C.

Dear Sir:

Pursuant to yours of August 23, in which you give us the opportunity of submitting a brief for the location of the Government Armor Plate Plant, we have pleasure in respectfully submitting same, herewith.

The Columbus Chamber of Commerce, Columbus, Ohio, vouches for the information contained herein. It is absolutely reliable. The statistical data is taken from sources regarded as the most authentic.

Very respectfully,
THE COLUMBUS CHAMBER OF COMMERCE,
John A. Kelley. Manager, Industrial Bureau.

1916

LOCATING THE GOVERNMENT ARMOR PLATE PLANT

BRIEF FOR COLUMBUS, OHIO

Factors Involved

There are five major economic factors to be considered in determining the location of the Government Armor Plate Plant. These factors are:

1—Safety.
2—Accessibility
  A—With Regard to Raw Materials.
  B—With Regard to Markets.
3—Labor.
4—Climate and Living Conditions.
5—Attitude of the Community.

Considering these factors in their natural order, and as a whole, we will endeavor to prove that in Columbus, Ohio, is found every requirement, to a greater degree, than in any other community of the United States.

FACTOR I

Safety

The subject of safety must be approached with due regard to the economic considerations involved in the manufacture of armor plate. It is obvious that the requirement of safety may be met by locating the plant in Utah, although it is entirely impractical to do so, for economic reasons.

If the requirement of safety may be secured in a district where all of the economic conditions are thoroughly sound, it will be to the best interests of the Government to establish its plant in such a district.

It is not only reasonable but essential to accept the fact that the majority of private corporations engaged in the manufacture of iron and steel have located their plants in territory which serves best their economic requirements. In other words, these corporations have established where may be secured the most profit with the least expenditure.

The map on page 5 indicates that within the territory outlined, namely the States of Pennsylvania, Ohio, Illinois, and Indiana, is produced 85% of the finished rolled iron and steel of the United States.

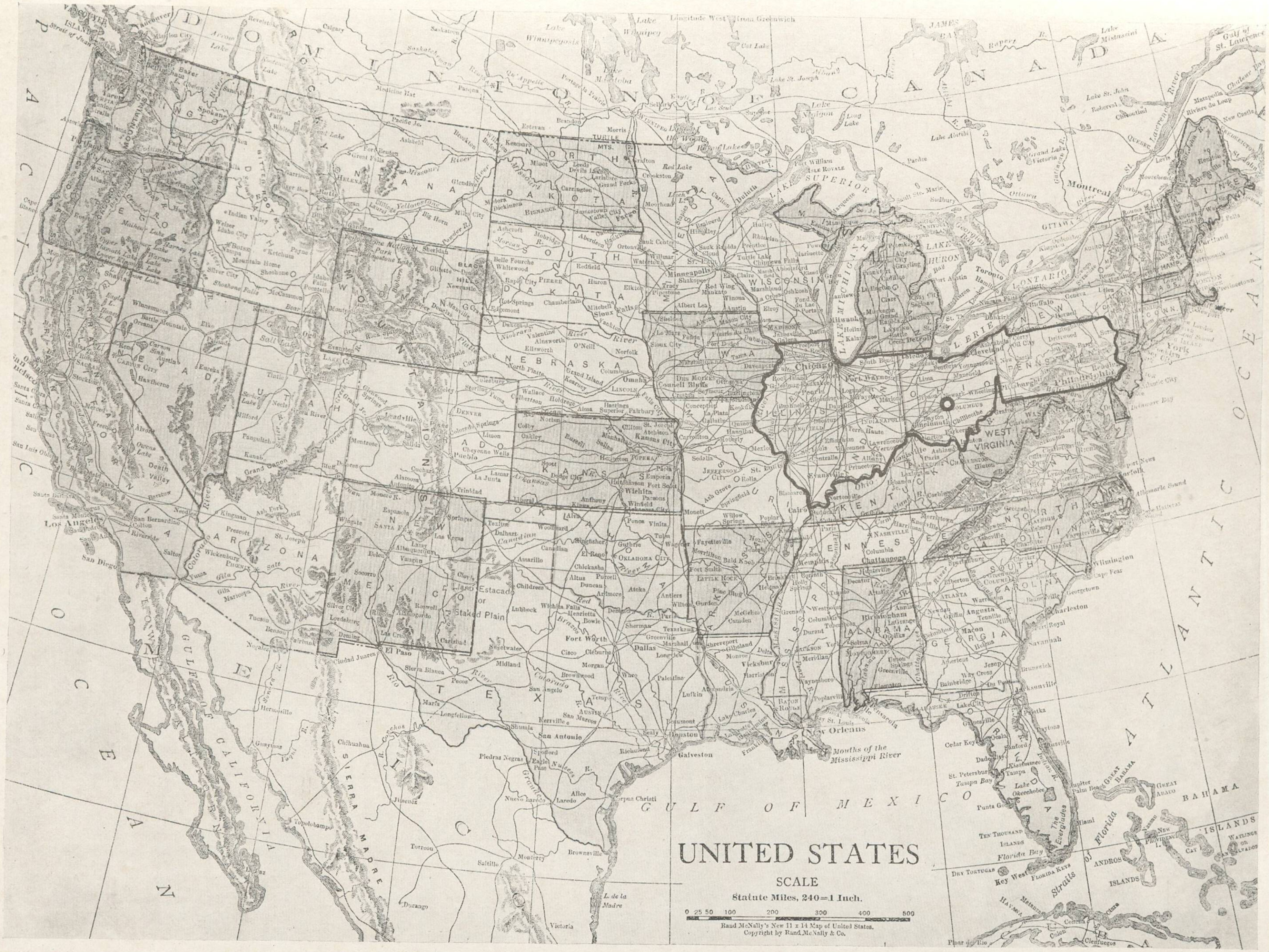
The American Iron and Steel Institute furnishes the following figures for the year 1915 (Calendar):

Production of All Kinds of Finished Rolled Iron and Steel

Pennsylvania	11,992,840	Gr. Tons	49.16%
Ohio	4,733,612	" "	19.40%
Indiana	2,104,072	" "	8.63%
Illinois	1,889,964	" "	7.75%
All Others	3,671,436	" "	15.06%
Total	24,392,924	" "	100.00%

The above figures do not include steel, iron and malleable castings, or iron and steel forgings, in which the above named States are equally productive.

PRINCIPAL IRON AND STEEL PRODUCING SECTION OF THE UNITED STATES.


UNITED STATES
SCALE
Statute Miles, 240=1 Inch.
0 25 50 100 200 300 400 500
Rand McNally's New 11 x 14 Map of United States.
Copyright by Rand McNally & Co.
GULF OF MEXICO
ATLANTIC OCEAN
PACIFIC OCEAN
CANADA
DOMINION OF CANADA
GULF OF CALIFORNIA
SIERRA MADRE

In the District Outlined Is Represented 72.12% of Potential Pig Iron Production of the United States.
In the Same District Is Represented 83.15% Potential Steel Ingot Production of the United States.

The same source of statistical data is quoted with reference to the production of pig iron, for the year 1915 (Calendar):

Production of Pig Iron

Pennsylvania	12,790,668	Gr. Tons	42.75%
Ohio	6,912,962	" "	23.11%
Illinois	2,447,220	" "	8.18%
New York and New Jersey	2,104,780	" "	7.04%
Alabama	2,049,453	" "	6.85%
All Others	3,611,130	" "	12.07%
Total	29,916,213	" "	100.00%

The figures for Indiana are not summarized here, but have been considered in making the statement that 80% of all the pig iron manufactured in the United States is produced in Pennsylvania, Ohio, Illinois and Indiana, the district outlined in the map on page 5.

Considering the productive districts of iron and steel as above noted, we now assert that we have produced conclusive proof, that somewhere within the district outlined, should be located the new Government Armor Plate Plant, providing that within the area outlined, the factor of safety may be secured.

We are not experts at the war game, nor are we familiar with the plan of defence, either of the Navy or War Department, in the event of attack. We appreciate that The Honorable Secretary of the Navy and The General Board of The Department of the Navy is better advised on the subject of defense. It would be presumptious for us to argue the matter.

WE HOLD NO BRIEF FOR THE SAFETY OF THE ENTIRE DISTRICT WHICH WE HAVE OUTLINED, BUT WE ASSERT WITH ALL CONFIDENCE, THAT NOTHING BUT AN AEROPLANE WILL EVER GET WITHIN FIRING DISTANCE OF THE GOVERNMENT ARMOR PLATE FACTORY IF LOCATED IN THE GEOGRAPHICAL AND COMMERCIAL CENTER OF SAID DISTRICT, NAMELY, COLUMBUS, OHIO.

Complete record of the potential pig iron production of the United States by States, issued by The American Iron and Steel Institute, January 1, 1916; also the potential steel ingot production by States, is appended to this brief, which brings our statistical data absolutely to date.

Our map on page 7 indicates a radius of 250 miles, with the center at Columbus, Ohio.

Using the same source of statistics above quoted, we show that within 250 miles of the city of Columbus, is produced 55% of all the pig iron manufactured in the United States.

The same district produced 60% of all the steel.

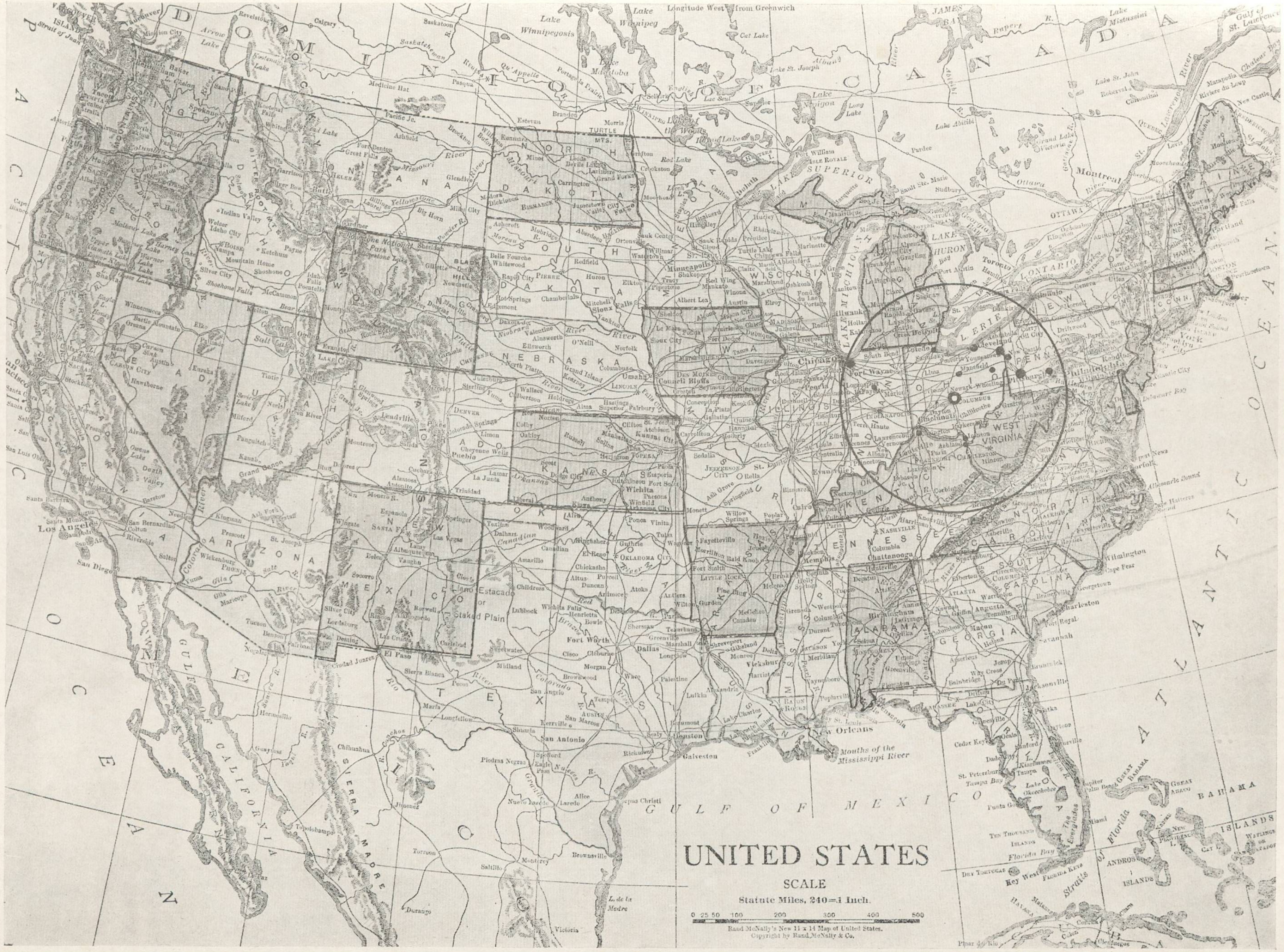
The State of Ohio represents 20.75% of the **potential** pig iron production of the United States.

Within the radius of 250 miles of Columbus there is represented 53.25% of the **potential** pig iron production of the United States.

The four States, Pennsylvania, Ohio, Indiana and Illinois, represent 72.12% of the **potential** pig iron production of the United States.

The State of Ohio represents 23.32% of the **potential** steel ingot production of the United States.

RADIUS MAP, TWO HUNDRED AND FIFTY MILES.


UNITED STATES
SCALE
Statute Miles, 240=1 Inch.
0 25 50 100 200 300 400 500
Rand McNally's New 11 x 14 Map of United States.
Copyright by Rand McNally & Co.
DOMINION OF CANADA
PACIFIC OCEAN
ATLANTIC OCEAN
GULF OF MEXICO
GULF OF CALIFORNIA
Longitude West from Greenwich

Within This Radius Is Represented 53.25% of Potential Pig Iron Production of the United States.
Within This Radius Is Represented 64.12% of Potential Steel Ingot Production of the United States.

The four States, Pennsylvania Ohio, Indiana and Illinois, **represent** 83.15% of the **potential** steel ingot production of the United States.

We have appended to this brief the statistics from which we quote, including those covering a radius of 250 miles of Columbus, Ohio.

IN THE CENTER OF THIS GREATEST OF ALL IRON AND STEEL PRODUCING AREAS LIES THE GREAT CAPITAL OF THE WONDERFUL STATE OF OHIO. LOCATED ON A PLATEAU, NEARLY ONE THOUSAND FEET ABOVE SEA LEVEL, COLUMBUS, OHIO, OFFERS THE MOST IDEAL, THE MOST PRACTICAL ARMOR PLATE MANUFACTURING SITE IN THE UNITED STATES.

With due regard to all the considerations involved we make this statement and now set out to prove it.

FACTOR II

Accessibility

With Regard to Raw Materials

The first essential in the manufacture of armor plate is pig iron, of good quality.

We assume that the government will buy its pig iron in the open market rather than to produce it, because the pig iron requirements of a 20,000-ton armor plate plant, will not justify the expense of blast furnaces.

Within the City of Columbus, Ohio, is produced the sum of 350,000 tons of high-grade pig iron, per annum. One hundred and fifty thousand tons of this is produced by the Carnegie Steel Co., subsidiary of the U. S. Steel Corporation, for its own use.

Two hundred thousand tons of pig iron is produced annually by The Columbus Iron and Steel Company, which operates merchant furnaces and sells to the general trade. Only a very small portion of the output of The Columbus Iron and Steel Co., furnaces will be consumed by the armor plant, if the government purchases from this company.

Within a proper distance for conveyance, are found ideal manufacturing sites of from 30 to 300 acres, in such proximity that the Government may contract for the hot metal, carrying it directly to its refining furnaces. Or it may use the finished product at a freight charge F. O. B. Government Armor Plant, Columbus, Ohio, $4.00 per car load.

(B)

Reduction Ore

The next most important raw material is reduction ore.

Columbus, Ohio, offers such proximity to the great ore fields of the Superior region that **reduction ore may be laid down at The Government Armor Plate Plant, Columbus, Ohio, at fifty cents per gross ton, freight rate from Toledo, Ohio.**

The rate to Pittsburgh from Cleveland for the same ore is 82 cents (based on latest I. C. C. adjustment).

Columbus, has a distinct advantage in this respect, the rail rate on ore being lower than to any production point in the great manufacturing district outlined.

(C)

Limestone

Columbus, Ohio, is able to score again with reference to limestone, so essential in the manufacture of high grade steel. **The immense quarries of The Marble Cliff Quarries Company, are located in Columbus.** The freight rate delivered to any point within the shipping limits from the quarries being 21 cents per net ton.

There is an unlimited quantity of limestone in these great quarries perfectly suited for the uses of the Government Armor Plant.

(D)

Iron and Steel Scrap

Being located in the center of such a vast iron and steel producing district, it is hardly necessary to say that Columbus, Ohio, offers a scrap market sufficient for all requirements. **Columbus has developed a reputation as a railroad scrap iron market in itself, regardless of the large markets of which it is the geographical and railroad center.**

A freight rate of from 95 cents to $1.58 per ton will carry into Columbus all the iron and steel scrap desired, should the Government Plant requirements be in excess of the local supply.

(The various freight rates for all materials are appended to this brief.)

(E)

Alloys

Manganese, Titanium, Silicon, Vanadium

Ferro manganese and ferro tetanium, the former from the Pittsburgh district at $2.00 per ton rail rate and the latter from Buffalo at $2.32 per ton rate, may be had with the same facility in Columbus as afforded any good railroad center. Ferro silicon may come from the Buffalo district at $2.16 per ton freight rate while Vanadium comes from the Pittsburgh district at a rate of $2.00.

(F)

Refractory Materials

Dolomite, Magensite, Chrome Ore, Fire Clay Brick

Dolomite will come from Kenova, W. V., at rail rate of $1.36 per gross ton. Native magnesite may be had in California, or imported from Austria-Hungary, through Baltimore, laid down in Columbus at $2.52 per gross ton, rail rate. The Southern Ohio, or Carter County, Ky., fields furnish fine refactory materials. The freight rate from Portsmouth, Ohio, on fire clay brick is 79 cents, or from Strasburg, Ohio, at $1.00 per ton.

(G)

Fuel

Coal, Coke, Natural Gos

Lying midway between the great coal fields of Ohio, West Virginia and Kentucky, the facilities of Columbus, Ohio, for securing fuel are second

to none in the country. Ohio coals are higher in sulphur than those of parts of West Virginia and Kentucky, the latter being more desirable for the manufacture of the highest form of steel. However, the Ohio coal may be used for some purposes. **The freight rate from either the low sulphur coal mines of Kentucky or West Virginia is 90 cents per gross ton, to Columbus. From the Hocking fields of Ohio the rate is 65 cents.**

Despite years of heavy production, Ohio State University officials recently estimated, after a survey, that only one-sixth of the coal in Ohio has been mined. The vast resources of West Virginia and Kentucky offer an almost unlimited supply.

The wonderful railroad facilities of Columbus, Ohio, coupled with its proximity to the great coal fields, has given Columbus the reputation of being a big coal center, with the offices here of some of the largest operators in the United States.

Columbus has the most assured supply of natural gas of any large city in the United States.

And in this day an assured supply of natural gas is worthy of notice. The gas producing fields of Ohio and West Virginia are the sources of Columbus' supply.

The price is controlled by the city; the companies regulated by State Commission.

Gas for industrial purposes may be had in Columbus as low as 15 cents per thousand cubic feet, the rate depending upon maximum consumption. The average rate to manufacturers using large supplies is 21 cents. The big glass plants and the tile and pottery manufacturers use great quantities of gas and are always given the most satisfactory treatment.

The gas supply for Columbus is assured for many years to come and is a great industrial asset.

The schedule of rates of the Columbus Gas & Fuel Company is as follows:

To 400,000 cu. ft.	30 cts. per M.
400,000 to 800,000	25 cts. per M.
800,000 to 1,600,000	20 cts. per M.
Over 1,600,000	15 cts. per M.

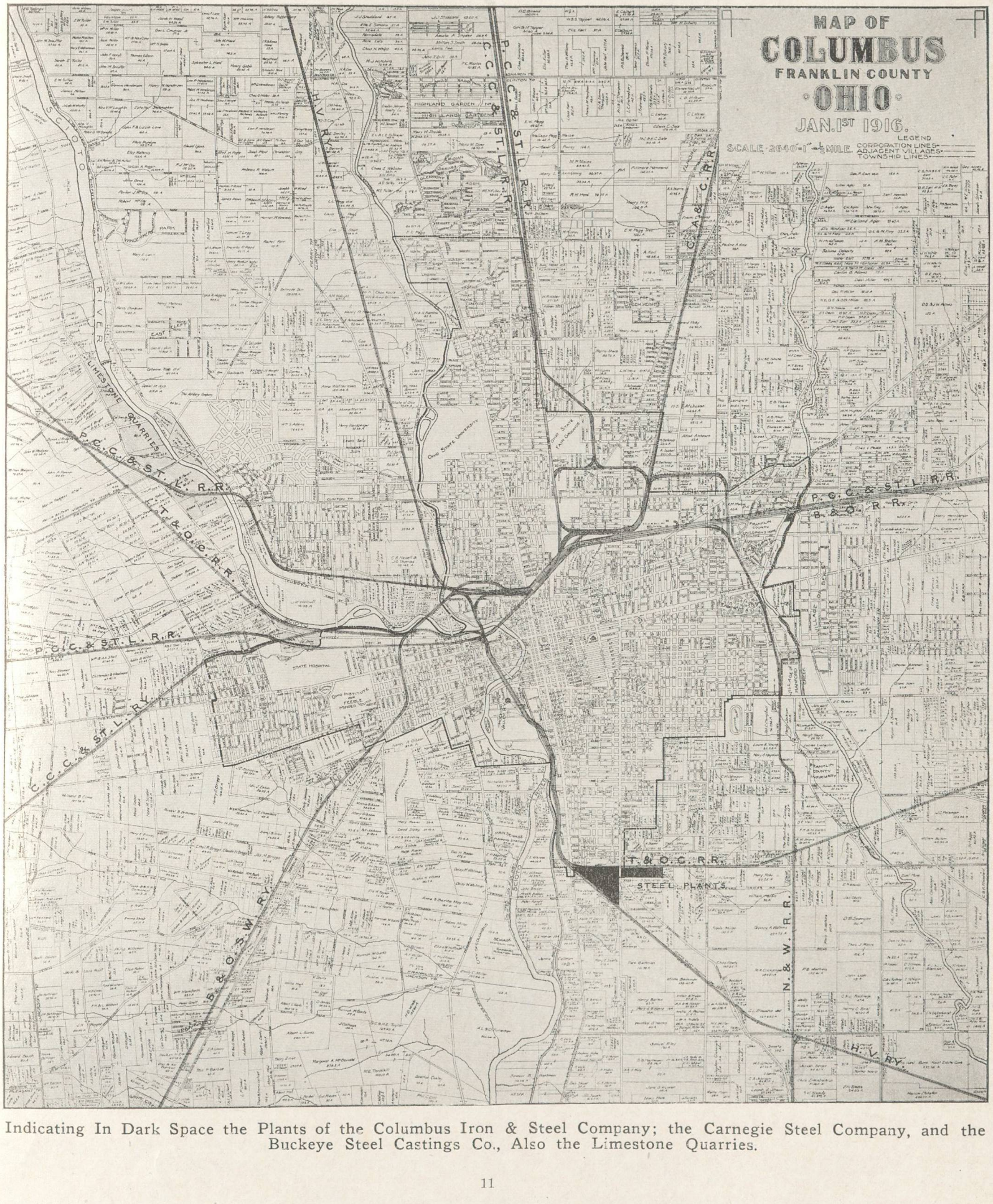
(H)

Water Supply

A good water supply is another requirement which is found in Columbus.

The Columbus Iron and Steel Co., and The Carnegie Steel Co., consume two-thirds of a million gallons of water daily from wells driven to an average depth of 75 feet.

We are able to offer further, a special inducement with reference to water supply, should your Board decide to locate the plant in Columbus. The Municipality has abandoned a pumping station on Alum Creek, which served the city in its younger days, **and this station with its battery of wells, capable of producing from 7,000,000 to 8,000,000 (seven million to eight million) gallons of water daily is for sale, at a very low figure.** The machinery, of course, has been removed from the building.


MAP OF
COLUMBUS
FRANKLIN COUNTY
OHIO
JAN. 1ST 1916.
SCALE 2640'=1"=½ MILE
LEGEND
CORPORATION LINES
ADJACENT VILLAGES
TOWNSHIP LINES
SCIOTO RIVER
LIMESTONE QUARRIES
P. C. C. & ST. L. R.R.
C. C. C. & ST. L. R.R.
H. V. RY.
C. A. & C. R.R.
T. & O. C. R.R.
B. & O. R.R.
B. & O. S. W. RY.
N. & W. R.R.
OHIO STATE UNIVERSITY
STATE HOSPITAL
HIGHLAND GARDEN
STEEL PLANTS

Indicating In Dark Space the Plants of the Columbus Iron & Steel Company; the Carnegie Steel Company, and the Buckeye Steel Castings Co., Also the Limestone Quarries.

Suitable sites for the armor plant, may be found at reasonable prices per acre, within a short distance of this pumping station. In fact suitable sites, flat ground, within easy walking distance of street car lines and having other facilities of the city within easy reach for extension, may be had on either the north, south, east or west sides of Columbus, at from $300.00 to $1000.00 per acre, railroad facilities included.

(I)

Incidental Supply Market

Being a large manufacturing and jobbing center, the incidental shop requirements of the Government Plant will be supplied without difficulty. Within a community of two hundred and fifty thousand people, well developed industrially, will be found, of course, those minor essentials so indispensable in manufacturing enterprises.

(J)

Railroad Facilities

This most important subject has been reserved for disposition in this brief under the Fastor of Accessibility, With Regard to Markets.

With Regard to Markets
Railroad Facilities

In the first place Columbus is one of the most strategic railroad centers in the United States because of its geographic location and commercial importance. The Government of the United States has already recognized this fact by locating here its largest Army Recruiting Depot and Training School. The Pennsylvania Railroad Company has recognized the fact, locating here one of its largest repair shops. The State of Ohio has located practically all of its institutions here and Henry Ford, the great automobile manufacturer, has established in Columbus one of his largest assembling plants. **The greatest government, greatest railroad company, greatest State and greatest manufacturer have already definitely recognized the geographical and railroad advantages of Columbus, Ohio.**

Columbus has sixteen divisions of nine trunk line railroads as follows:

Its sixteen railroad divisions are as follows:

Pennsylvania Lines West; Pittsburgh Division, Indianapolis Division, Little Miami Division, Toledo Division.

Baltimore & Ohio; Newark Division, B. & O. S. W.

Hocking Valley Rd.; Toledo Division, Hocking Division.

C., C., C. & St. L. Rd.; Cleveland and Cincinnati Divisions.

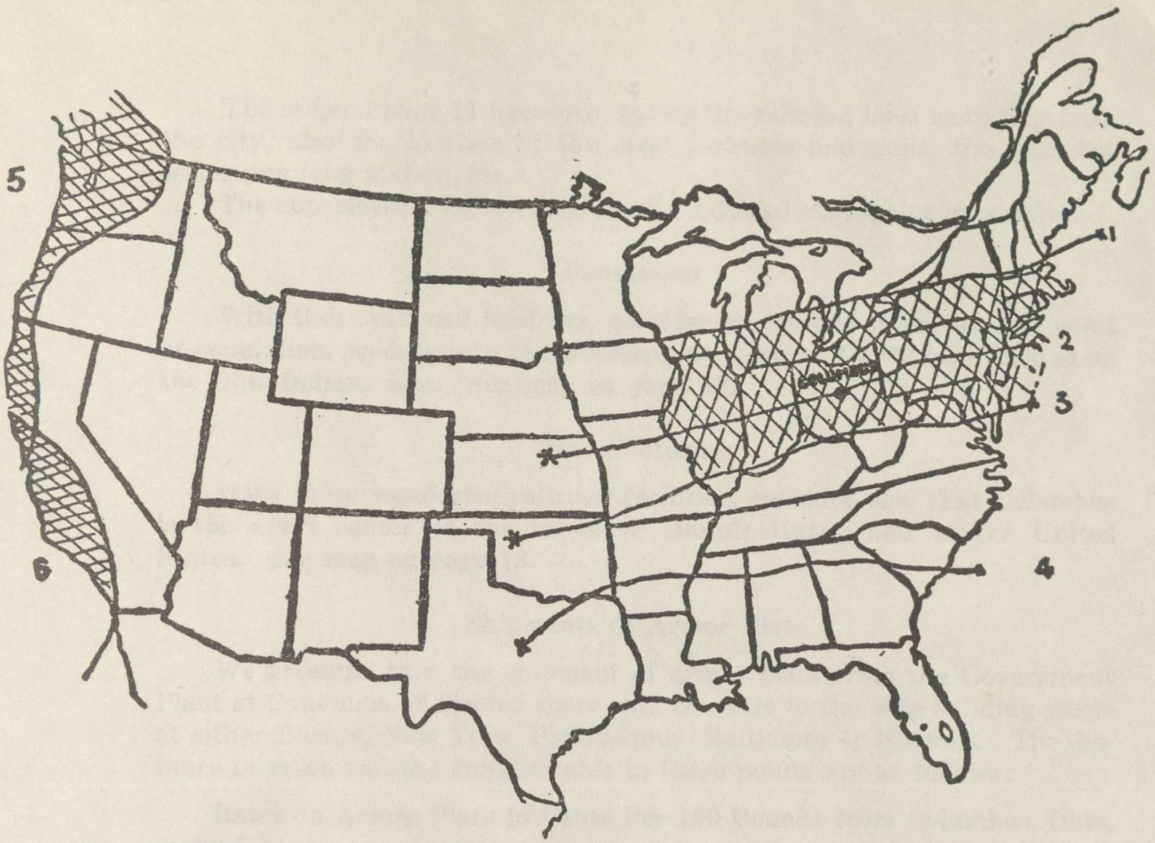
Norfolk & Western Rd.

Cleveland, Akron & Columbus Rd.—Pennsylvania Co.

Toledo & Ohio Central Rd.; Western, Corning, Eastern and St. Marys Divisions.

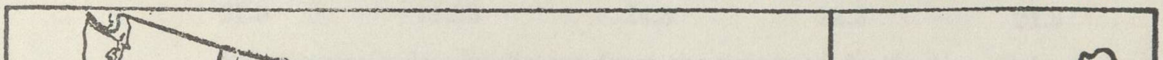
There are eleven electric railways operating out of Columbus in all directions.

INTENSIFIED MANUFACTURING BELT OF THE UNITED STATES


5
6
1
2
3
4
COLUMBUS

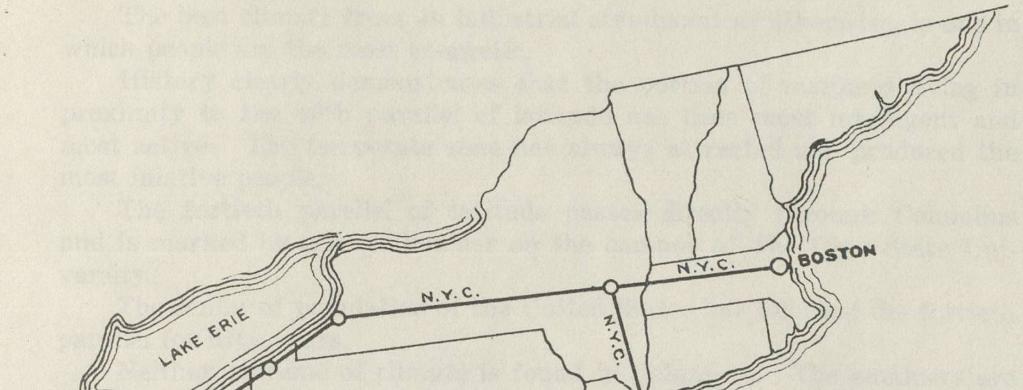
This Map Indicates the Relative Position of Columbus, the Exact Center of the District.

THE MEDIAN POINT OF POPULATION OF THE UNITED STATES


40°
40°
MEDIAN POINT
OHIO
COLUMBUS

Indicating the Proximity of Columbus, Ohio, to the Median Point on the Ohio-Indiana Line.

RAILROADS TO THE COAST


LAKE ERIE
N.Y.C.
N.Y.C.
N.Y.C.
BOSTON
N.Y.C.
PENNA
NEW YORK
PENNA
N.Y.C.
PHILADELPHIA
PENNA
PENNA
PENNA
B.&O.
B.&O.
BALTIMORE
COLUMBUS
N.&W.
N.&W.
NORFOLK

Showing the Direct Rail Routes From Columbus to Destination of Armor Plate.

lumbus factories are those of the foundry and machine shop, there are in Columbus a large proportion of skilled and semi-skilled mechanics.

The expert steel workers for the class of labor required in the Government Armor Plant, would, however, come from elsewhere. We expect to show, however, under the section relating to Climate and Living Conditions, that there is no difficulty in this situation, because these workmen will welcome the opportunity to make a home in this ideal American city. As a city in which to live, Columbus surpasses any other inland community of the United States, for reasons peculiar to itself and which we will very briefly describe under the factor to follow.

FACTOR IV

Climate and Living Conditions

The best climate from an industrial standpoint or otherwise, is one in which people are the most energetic.

History clearly demonstrates that the portion of mankind living in proximity to the 40th parallel of latitude has been most intelligent and most active. The temperate zone has always attracted and produced the most iniative people.

The fortieth parellel of latitude passes directly through Columbus and is marked by a huge boulder on the campus of The Ohio State University.

The center of population of the United tSates has followed the fortieth parallel for fifty years.

Neither extreme of climate is found in Columbus. The summers are pleasant, the winters comfortable.

Columbus has always been regarded as an ideal residential city. A building code, enforced early in its development; a housing code now used as a model for other communities, have given Columbus thousands of pretty homes and lawns, unmarred by lofty tenements or encroaching buildings. Plenty of light and air is provided for all by regulating the distance between houses and requirements of light and ventilation are enforced. The result is a delight to the eye of the visitor.

Magnificent public utilities are provided in Columbus. The wonderful water works purification system has attracted the eyes of the world. Water, ninety-nine and three fifths per cent pure (99 3-5) is served to the public. The garbage reduction and disposal plants are models of their kind. The streets are kept clean; the rivers are unpolluted, in fact the health of the community is unusually well guarded.

Universal transfers and eight tickets for 25 cents, with a wonderful system, gives Columbus the cheapest and best railway service in the country.

Natural gas in unlimited quantities for domestic purposes at a rate of 25 cents per thousand cubic feet, is a decided advantage.

Beautiful streets, picturesque streams, large parks and playgrounds, fine State institutions and grounds, including the State Capital, splendidly appointed clubs, are added attractions.

Sixty large public schol buildings and a number of private and parochial schools offer excellent facilities for education. The Ohio State University is located here with its courses in business administration, all

branches of engineering, medicine, agriculture and arts, one of the greatest institutions of its kind in the world.

Twenty-two building and loan association have enabled the people of Columbus to secure their own homes. Fifty per cent of the residents of Columbus are home owners. And where you find the wage earners owning their homes, you will find contentment.

Rental property is reasonable because of economic conditions due to a nearness to the materials which go into construction. The center of a great brick producing area, Columbus builders find this material cheaper than in most communities, as well as a large number of the other materials. It is possible to rent a very pretty eight-room, completely modern residence in good residential sections, from $25.00 to $50.00 per month, depending upon the location. In the manufacturing sections modern homes, single or double, may be had from $14.00 to $20.00 per month.

Being the center of such a great agricultural State it is natural that the cost of living in Columbus is unusually low. The products of the fields within Franklin county alone, of which Columbus is the county seat, approximates $6,000,000 annually. Central Ohio farms that serve Columbus are very productive. The centrality of location and fine railroad facilities bring to Columbus the choice of the supplies of the country in season at the lowest prices obtainable.

There are more than 200 churches and chapels in Columbus and a church membership of more than 75,000.

The seven public libraries contain more than 400,000 volumes.

A municipal charter embodies the best features of city government and home rule.

Columbus offers a wonderful opportunity to thrive in business; a healthful climate in which to live; a law abiding and refined community with which to associate and educational privileges unexcelled.

FACTOR V

Attitude of the Community

The attitude of the community may have an important bearing upon the successful operation of the Government Armor Plant. It seems unlikely that the present great steel manufacturing communities or centers, will welcome the Government Plant. The Government would be compelled to remain in constant competition with private corporations employing the same class of labor. An atmosphere of hostility is likely to prevail in the most intensive steel centers.

And where it is unnecessary for the Government to face these contingencies, it would be better, in our opinion, to locate where there would be little or no competition from the standpoint of skilled labor, required in making high-grade steel.

Columbus offers the greatest inducements, considering all the factors involved, for the location of the Government Armor Plate Plant and the community will welcome its advent.

Freight Rate on Raw Materials

Material **To Columbus**

Iron Ore—From Toledo, 50 cents gross ton.
Pig Iron—From Columbus, $4.00 per car.
Limestone—From Columbus, 21 cents net ton.
Iron and Steel Scrap—From Chillicothe, $1.00 gr. ton; from Cleveland, $1.58 gr. ton; from Ashland, Ky., $1.32 gr. ton; from Circleville, O., 95 cents gr. ton; from Zanesville, O., $1.10 gr. ton.
Ferro Manganese—From Pittsburgh, $2.00 gr. ton; from Baltimore, $3.50 gr. ton.
Ferro Titanium—From Buffalo, $2.32 gr. ton.
Ferro Silicon—From Sharpsburg, $2.00 gr. ton.
Vanadium—From Pittsburgh, $2.00 gr. ton.
Chrome Ore—From Baltimore, $2.52 gr. ton; from California,
Dolomite—From Kenova, W. Va., $1.36 gr. ton.
Fire Clay Brick—From Portsmouth, 79 cents gr. ton; from Strasburg, $1.00 gr. ton.

POTENTIAL PIG IRON PRODUCTION OF THE UNITED STATES

JANUARY, 1, 1916.

State	Annual Capacity Gross Tons
Alabama	3,806,000
Colorado	625,000
Connecticut	15,000
Georgia	129,500
Indiana	1,611,200
Illinois	3,611,200
Kentucky	333,000
Maryland	663,000
Massachusetts	10,000
Michigan	614,000
Minnesota	405,000
Mississippi	3,500
Missouri	65,000
New Jersey	430,000
New York	2,972,000
Ohio	9,589,625
Oregon	15,000
Pennsylvania	17,953,600
Tennessee	743,400
Texas	51,000
Virgina	1,014,000
West Virgina	408,000
Wisconsin	456,400
Total	45,755,325

POTENTIAL STEEL INGOT PRODUCTION OF THE UNITED STATES

JANUARY 1, 1916.

State	Gross Tons
Alabama	988,000
California	90,000
Colorado	1,140,000

Connecticut	85,800
Delaware	150,000
District of Columbia	13,200
Georgia	90,000
Illinois	3,571,200
Indiana	3,255,000
Kentucy	360,000
Maine	12,000
Maryland	747,000
Massachusetts	190,000
Michigan	15,000
Minnesota	500,000
New Jersey	254,700
New York	2,093,350
Ohio	10,145,000
Pennsylvania	19,211,800
Rhode Island	37,500
Virginia	12,000
Washington	50,000
West Virginia	503,000
Total	43,514,550

POTENTIAL STEEL INGOT PRODUCTION WITHIN A RADIUS OF 250 MILES OF COLUMBUS, OHIO

JANUARY 1, 1916.

Location	Annual Capacity Gross Tons
Gary, Indiana	2,160,000
Indiana Harbor, Indiana	1,000,000
Kokomo, Indiana	95,000
Total	3,255,000
Ashland, Kentucky,	180,000
Newport, Kentucky	180,000
Total	360,000
Cumberland, Md.	35,000
Bellaire, Ohio	420,000
Canton, Ohio	515,000
Cleveland, Ohio	1,745,000
Columbia Heights, Ohio	240,000
Columbus, Ohio	184,000
Lorain, Ohio	946.000
Lowellville, Ohio	185,000
Middletown, Ohio	205,000
Mingo Junction, Ohio	600,000
Norwalk, Ohio	26,000
Portsmouth, Ohio	225,000
Steubenville, Ohio	400,000
Youngstown, Ohio	4,454,000
Total	10,145,000
Aliquippa, Penna	12,000
Bessemer, Penna.	1,850,000
Brackenridge, Penna.	300,000
Braelurn, Penna.	11,200
Bridgeville, Penna.	10,200
Butler, Penna.	220,000
Charleroi, Penna.	4,500

Clairton, Penna.	600,000
Donora, Penna.	550,000
Duquesne, Penna.	1,346,000
Erie, Penna.	42,000
Farrell, Penna.	480,000
Johnstown, Penna.	1,780,000
Latrobe, Penna.	78,900
McKeesport, Penna.	701,200
Midland, Penna.	500,000
Monessen, Penna.	560,000
Munhall, Penna	2,441,000
New Castle, Penna.	700,000
Pittsburgh, Penna.	802,700
Sharon, Penna.	290,000
Vandergrift, Penna.	275,000
Washington, Penna.	10,000
West Leechburg, Penna	40,000
Total	13,604,200
Benwood, West Va.	406,000
Charleston, West Va.	7,000
Follansbee, West Va.	90,000
Total	503,000
Grand Total	27,902,200

Note—Ingot production not stated for the Jones and Laughlin Steel Company.

POTENTIAL PIG IRON PRODUCTION WITHIN A RADIUS OF 250 MILES OF COLUMBUS, OHIO

JANUARY 1, 1916.

Location	Number Furnaces	Annual Cap. Gross Tons
Gary, Indiana	8	1,311,200
Indiana Harbor, Indiana	2	300,000
TOTAL	10	1,611,200
Bellaire, Ohio	2	276,200
Canal Dover, Ohio	1	146,000
Cleveland, Ohio	10	1,432,125
Columbus, Ohio	4	356,000
Culbertson, Ohio	1	72,000
Girard, Ohio	1	100,000
Hamilton, Ohio	1	100,000
Hanging Rock, Ohio	1	50,000
Hubbard, Ohio	2	270,000
Ironton, Ohio	6	349,000
Jackson, Ohio	3	144,000
Leetonia, Ohio	2	245,000
Lorain, Ohio	5	817,000
Lowellville, Ohio	1	150,000
Martins Ferry, Ohio	1	100,000
Mingo Junction, Ohio	3	532,000
New Straitsville, Ohio,	1	18,000
Niles, Ohio	1	96,000
Steubenville, Ohio	3	365,000
Struthers, Ohio	1	170,000
Toledo, Ohio	2	300,000

Wellston, Ohio	3	120,000
Youngstown, Ohio	17	2,808,000
TOTAL	72	9,016,325
Bessemer, Pennsylvania	11	1,860,000
Clariton, Pennsylvania	3	459,000
Donora, Pennsylvania	2	350,000
Dunbar, Pennsylvania	2	150,000
Erie, Pennsylvania	1	109,500
Etna, Pennsylvania	3	441,000
Farrell, Pennsylvania	3	406,000
Johnstown, Pennsylvania	8	1,365,000
Josephine, Pennsylvania	2	280,000
Kittanning, Pennsylvania	1	100,000
McKeesport, Pennsylvania	4	660,000
Midland, Pennsylvania	1	180,000
Monessen, Pennsylvania	2	360,000
Neville Island, Pennsylvania	1	159,000
New Castle, Pennsylvania	5	723,000
Pittsburgh, Pennsylvania	12	1,544,000
Rankin, Pennsylvania	7	1,101,000
Scotdale, Pennsylvania	1	110,000
Sharon, Pennsylvania	3	245,000
Sharpsville, Pennsylvania	6	560,000
South Duquesne, Pennsylvania	6	1,035,000
West Middlesex, Pennsylvania	2	180,000
Woodlawn, Pennsylvania	4	728,000
TOTAL	90	13,105,000
Benwood, West Virginia	2	233,000
Wheeling, West Virginia	2	175,000
TOTAL	4	408,000
Ashland, Kentucky	3	225,000
GRAND TOTAL	179	24,365,525
Detroit, Michigan	3	270,000

Respectfully submitted on behalf of the Columbus Chamber of Commerce.

GEORGE R. HEDGES, Chairman.
F. W. FREEMAN,
H. H. GRAY ,
W. H. HOAGLAND,
E. F. ARRAS,
W. E. LANGDON,
MAX STERN,
A. M. ALLEN,
HENRY A. WILLIAMS,
Industries Committee.

The Columbus Chamber of Commerce acknowledges with gratitude the assistance rendered its committee by Mr. S. E. Eldridge, in the preparation of this brief.

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